Darryl Hannan

PhD Candidate

🌐 hannandarryl.github.io   📍 San Antonio, TX

Education

Doctor of Philosophy   *Drexel University*
Computer Science   *June 2022 – Present*
Member of SPARSE Coding Lab, advised by Professor Edward Kim

Master of Science   *University of North Carolina at Chapel Hill*
Computer Science   *August 2018 – May 2021*
Member of MURGe-Lab, advised by Professor Mohit Bansal

Bachelor of Science   *Villanova University*
Computer Science   *August 2014 – May 2018*
Major: Computer Science
Concentration: Cognitive Science
GPA: 3.77

Research Experience

Pacific Northwest National Laboratory   *July 2023 – Present*
PhD Intern   *Seattle, Washington (Remote)*
Research in the areas of computer vision and neuromorphic computing as part of National Security Internship Program.

Drexel University   *June 2022 – Present*
NSF Fellow   *Philadelphia, Pennsylvania (Remote)*
Conducted research focused on biologically-inspired learning techniques, event-based video processing, and neuromorphic computing.

Drexel University   *September 2021 – June 2022*
Artificial Intelligence Engineer   *Philadelphia, Pennsylvania (Remote)*
Implemented and applied biologically-inspired learning techniques to a pneumothorax classification task.

University of North Carolina at Chapel Hill   *August 2018 – August 2021*
Research Assistant/NSF Fellow   *Chapel Hill, North Carolina*
Conducted research spanning a variety of subfields in NLP, with an emphasis on multimodal processing.

Tencent America   *Summer 2020*
NLP Research Intern   *Bellevue, Washington (Remote)*
Conducted research on improving transformer-based conversational QA models via dialogue generation techniques.

Los Alamos National Laboratory   *Summer 2018*
Applied Machine Learning Fellow   *Los Alamos, New Mexico*
Applied biologically-inspired sparse-coding model to language, attempting to exploit top-down feedback to influence sentence-level representations.

Los Alamos National Laboratory   *Summer 2017*
Student Research Scientist   *Los Alamos, New Mexico*
Developed a multimodal deep sparse coding model using biologically-inspired learning techniques.

Publications

The Impact of an XAI-Augmented Approach on Binary Classification with Scarce Data
IJCAI XAI Workshop 2024

Ximing Wen, Rosina O. Weber, Anik Sen, **Darryl Hannan**, Steven C. Nesbit, Vincent Chan, Alberto Goffi, Michael J. Morris, John C. Hunninghake, Nicholas E. Villalobos, Edward Kim, and Christopher J. MacLellan

Interpretable Models for Detecting and Monitoring Elevated Intracranial Pressure
ISBI 2024

Darryl Hannan, Steven C. Nesbit, Ximing Wen, Glen Smith, Qiao Zhang, Alberto Goffi, Vincent Chan, Michael J. Morris, John C. Hunninghake, Nicholas E. Villalobos, Edward Kim, Rosina O. Weber, and Christopher J. MacLellan

Event-to-Video Conversion for Overhead Object Detection
SSIAI 2024

Darryl Hannan, Ragib Arnab, Gavin Parpart, Garrett T. Kenyon, Edward Kim, and Yijing Watkins

MobilePTX: Sparse Coding for Pneumothorax Detection Given Limited Training Examples
IAAI 2023

Darryl Hannan, Steven C. Nesbit, Ximing Wen, Glen Smith, Qiao Zhang, Alberto Goffi, Vincent Chan, Michael J. Morris, John C. Hunninghake, Nicholas E. Villalobos, Edward Kim, Rosina O. Weber, and Christopher J. MacLellan

StoryDALL-E: Adapting Pretrained Text-to-Image Transformers for Story Continuation
ECCV 2022

Adyasha Maharana, **Darryl Hannan**, and Mohit Bansal

RESIN-11: Schema-guided Event Prediction for 11 Newsworthy Scenarios
NAACL 2022

Xinya Du, Zixuan Zhang, Sha Li, Pengfei Yu, Hongwei Wang, Tuan Lai, Xudong Lin, Ziqi Wang, Iris Liu, Ben Zhou, Haoyang Wen, Manling Li, **Darryl Hannan**, Jie Lei, Hyounghun Kim, Rotem Dror, Haoyu Wang, Michael Regan, Qi Zeng, Qing Lyu, Charles Yu, Carl Edwards, Xiaomeng Jin, Yizhu Jiao, Ghazaleh Kazeminejad, Zhenhailong Wang, Chris Callison-Burch, Mohit Bansal, Carl Vondrick, Jiawei Han, Dan Roth, Shih-Fu Chang, Martha Palmer, and Heng Ji

Improving Generation and Evaluation of Visual Stories via Semantic Consistency
NAACL 2021

Adyasha Maharana, **Darryl Hannan**, and Mohit Bansal

ManyModalQA: Modality Disambiguation and QA over Diverse Inputs
AAAI 2020

Darryl Hannan, Akshay Jain, and Mohit Bansal

Deep Sparse Coding for Invariant Halle Berry Neurons
CVPR 2018

Edward Kim, **Darryl Hannan**, and Garrett Kenyon

Posters

Emojis and Weather
CCSCNE 2018

Awards

National Science Foundation GRFP Fellowship (15% acceptance)	2019
Applied Machine Learning Summer Research Fellowship (10% acceptance)	2018
Villanova Center for Research and Fellowships Research and Travel Grant	2017

Service

Reviewer for WACV 2024-2025
Reviewer for EACL-SW 2024
Reviewer for SSIAI 2024
Reviewer for Workshop on Document Intelligence 2019